

Begin

BEGIN

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VOSTROV, I. D.

VOSTROV, I. D. -- "Problems in Use of Planes of Static Action in Mining Fine Flat Dropping Seams." Sub 28 Feb 52, Moscow Mining Inst imeni I. V. Stalin. (Dissertation for the Degree of Candidate in Technical Sciences.)

SO: VECHERNAYA MOSKVA, January-December 1952

VOSTROV, I. D.

Fuel Abstracts
Vol. XV, No. 2
Feb. 1954
Natural Solid Fuels;
Winning

976. Definitions of "Rock Pressure". II. Problem of Defining. Rock Pressure. Vostrov, I. D. (Ugol (Coal), Aug. 1953, 32, 33). Rock pressure is regarded as a phenomenon which occurs only after mining has commenced. It is defined as the pressure of rock on protective pillars and strata, and on mine supports. (L).

VOSTROV, I.D., dotsent, kandidat tekhnicheskikh nauk.

Using metal cap sets for stop timbering in thin inclined seams.
Nauch. trudy MOI no.16:161-166 '55 [cover '56]. (MLBA 10:4)
(Mine timbering)

VOSTROV, I. D.

KILYACHKOV, Anatoliy Petrovich; VOSTROV, I.D., otvetstvennyy redaktor;
SHUSHKOVSKAYA, Ye.L., redaktor izdatel'stva; VINOGRADOVA, G.V.,
redaktor izdatel'stva; ZAZUL'SKAYA, V.F., tekhnicheskiy redaktor

[Opening and systems of working coal deposits] Vskrytie i sistemy
razrabotki ugol'nykh mestorozhdenii. Moskva, Ugletekhizdat, 1957.
391 p. (MLRA 10:9)

(Coal mines and mining)

KALYUZHNYY, Nikolay Tikhonovich; VIDULIN, Anatoliy Yevdokimovich; VOSTROV,
I.D., otv. red.; ZHUKOV, V.V., red. izd-va; MINSKER, L.I., tekhn.
red.

[Distribution of hard headings in developing coal deposits] Raspo-
lozhenie polevykh vyrabotok pri razrabatke ugol'nykh mestorozhdenii.
Moskva, Gos.nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1961. 106 p.
(MIRA 14:6)

(Coal mines and mining)

YOSTROV, I.D., dots., kand.tekhn.nauk

Investigating reef stability in stopes during Donets Basin flat
seam mining. Nauch. trudy MGI no.18:11-17 '57. (MIRA 11:9)
(Donets Basin--Stoping (Mining))
(Mine reef bolting)

SONIN, S.D., prof.; VOSTROV, I.D., dots., kand.tekhn.nauk

Mine development and order of working Donets Basin flat seams
using the method of advancing longwalls on strike. Nauch. dokl. vys.
shkoly; gor. delo no.3:3-13 '58. (MIRA 11:9)

1. Predstavlena kafedroy razrabotki plastovykh mestorozhdeniy
Moskovskogo gornogo instituta im. I.V. Stalina.
(Donets Basin--Coal mines and mining)

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 7,
p 219 (USSR) 15-57-7-10183

AUTHOR: Vostrov, I. D.

TITLE: Application of Present Metal Caps for Mine Timbers
in Working Thin Slightly Inclined Strata (K voprosu o
primenenii metallicheskich verkhnyakov prizaboynoy
krepi ochistnykh zaboyev pri razrabotke tonkikh
pologopadayushchikh plastov)

PERIODICAL: Nauch. tr. po vopr gorn. dela, Mosk. gorn. in-t,
1956, sb. Nr 16, pp 161-166

ABSTRACT: The present article presents operational analyses
for four types of metal caps to be used on mine
timbers. These types are as follows: 1) rigid;
2) jointed; 3) cantilever; 4) spring-type. The caps
are considered in relation to the state of the roof
covering, namely: 1) the presence of irregularities

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15-57-7-10183

Application of Present Metal Caps (Cont.)

on the surface; and 2) the extent of fissures. Rigid caps are recommended for use on stable roof rock without irregularities, where mechanical methods of bracing are employed. Jointed caps may also be used on stable rock (but they are more difficult to use). Spring-type caps insure the most favorable conditions for support of the roof. The low resistance of the cantilever type of caps to deformation limits their use to stable rock. Thus the area of usage of available caps is restricted. New types of caps, suitable for bracing roofs of average stability, should be developed.

G. A. Teplitskiy

Card 2/2

SONIN, S.D., prof.; SELETSKIY, R.A., dotsent; VOLOTROV, I.D., dotsent

Advancing and retreating systems for mining levels in Donets Basin
flat seams. Nauch. dokl. vys. shkoly; gor. delo no.1:15-26 '58.
(MIRA 11:6)

1. Predstavlena kafedroy razrabotki plastovykh mestorozhdeniy
Moskovskogo gornogo instituta im. I.V. Stalina.
(Donets Basin--Mining engineering)

VOSTROV, I.D., kand.tekhn.nauk.

Use of UKT-1 cutter loaders in mines of the "Rostovugol"
combine. Nauch.trudy MGI no.13/14:43-63 '54. (MIRA 10:10)
(Coal mining machinery)
(Donets Basin--Coal mines and mining)

MISEUSTIN, Ye.N.; VOSTROV, I.S.; NIKITIN, D.I.; YEROFYEV, N.S.

Role of aerobiosis in the formation of humic compounds.
Mikrobiologiya 34 no.3:497-501 My-Je '65.

(MIRA 18:11)

1. Institut mikrobiologii AN SSSR.

VOSTROV, I. S.

MISHUSTIN, Ye.N.; MIRZOYEVA, V.A.; ~~VOSTROV, I. S.~~

Effect of T.S.Mal'tsev's method of tillage on the microflora and
biodynamics of Chernozem soils. Izv. AN SSSR. Ser.biol. no.4:
466-479 J1-Ag '57. (MLRA 10:8)

1. Institut mikrobiologii Akademii nauk SSSR
(CHERNOZEM SOILS) (TILLAGE) (SOILS--BACTERIOLOGY)

J-3

USSR / Soil Science. Biology of Soils

Abs Jour : Ref. Zhur - Biologiya, No 17, 1958, No. 77396

Author : Mishustin, Ye. N.; Mirzoyeva, V. A.; Vostrov, I. S.
Inst : Shadrin Experimental Station AS USSR
Title : Influence of Cultivation of Chernozem Soil by the
T. S. Mal'tsev Method on Its Microflora and Biodynamics

Orig Pub : Izv. AN SSSR, ser. biol., 1957, No 4, 466-479

Abstract : The biological activity of chernozems cultivated at a depth of 50 cm and of the same soils cultivated by the usual method at a depth of 25-30 cm was compared at the Shadrin Experimental Station (1953-1956). Samples were taken of soils that were in a fallow state and of those occupied by crops of spring wheat and vetch-oat mixture. It is shown that deep nonbanking cultivation of the soil activates the course of the microbiological processes in the soil. Conditions are created for the development of

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USSR / Soil Science. Biology of Soils.

J-3

Abs Jour : Ref. Zhur - Biologiya, No 17, 1958, No. 77396

aerobic and facultative-anaerobic groups of microorganisms in deep layers of the soil (up to 50 cm). With common cultivation at this depth, microbiological activity is suppressed. The processes of nitrification and separation from the soil of CO_2 are significantly strengthened. The acid-recovery potential has several features connected with the original spread of the root system of the plants. The positive effect of cultivation of soil according to the Mal'tsev method endured for three years. The authors consider that nonbank plowing can be recommended only for regions with a sufficient quantity of precipitation. Bib. 26 titles. -- G. H. Nesterova.

Card 2/2

MISUSTIN, E.N.; VOSTROV, I.S.

Biological principles of tillage. Rost vyroba 9 no.7/8:
752-756 JI-Ag '63.

1. Mikrobiologický ustav Akademie ved SSSR, Moskva.

YEROFEYEV, N.S.; VOSTROV, I.S.

Use of straw as an immediate fertilizer. Izv. AN SSSR. Ser.
biol. no.5:668-676 S-O '64. (MIRA 17:9)

1. Institut mikrobiologii AN SSSR, Moskva.

VOSTROV, I.S.

Effect of straw remnants on crops. Izv. AN SSSR. Ser. biol.
no.6:906-913 N-D '63. (MIRA 17:2)

1. Institute of Microbiology, Academy of Sciences of the
U.S.S.R., Moscow.

VOSTROV, I.S.

Effect of the Mal'tsev tillage system on microbiological indices
and biological activeness of soils. Trudy Inst. mikrobiol. no.7:
205-213 '60. (MIRA 14:4)

1. Institut mikrobiologii AN SSSR.
(SOIL MICRO-ORGANISMS) (TILLAGE)

VOSTROV, M.V. (Moskva)

Use of a phase plane method for studying nonlinear discrete
systems. Izv. AN SSSR, Otd. tekhn. nauk. Energ. i avtom. no.3:
31-43 My-Je '61. (MIRA 14:7)
(Automatic control) (Pulse techniques (Electronics))

1. VOSTROV, P. P.
2. USSR (600)
4. Vegetable Gardening
7. Vegetable gardening without transplanting, Sad 1 og., No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

VOSTROV, V. (Alma-Ata) kandidat istoricheskikh nauk.

Restore the industries and handicrafts of Kazakhstan. Prem. keep. no. 8:
29 Ag '56. (MIRA 9:10)

1. Starshiy nauchnyy sotrudnik Akademii nauk Kazakhskoy SSR.
(Art industries, Kazakh)

VOSTROV, V
VOSTROV, V.

New method for making poles for electric transmission lines.
Stroitel' no. 3:26 Mr '61. (MIRA 14:2)
(Electric lines—Poles)

1. V. VOSTROV, Eng.

2. USSR (600)

4. Building

7. Publicizing outstanding work methods. Biul. stroi. tekhn. 10 no. 1. 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

VOSTROV, V.M., inzh.; GUROVSKIY, N.Ya., nauchnyy red.; PONOMAREV, P.Z.,
red. izd-va; ABRAMOVA, V.M., tekhn. red.

[Pamphlet on safety measures for the asphalt concrete worker]
Paniatka po tekhnike bezopasnosti dlia asfal'tonshchika. Mo-
skva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit. mate-
rialam, 1961. 22 p. (MIRA 14:6)
(Asphalt concrete--Safety measures)

VOSTROV, V.M.

Small machinery for pipeline work. Stroi. truboprov. 8
no.8:22-23 Ag '63. (MIRA 16:11)

VOSTROV, V.M.; CHEKHOVSKAYA, T.P., red.izd-va; BOROVNEV, N.K.,
tekhn. red.

[Safety regulations for concrete workers] Pamiatka po tekhnike
bezopasnosti dlia betonshechika. Izd.2., ispr. Moskva, Gos.
izd-vo lit-ry po stroit. arkhitekt. i stroit. materialam, 1961.
22 p. (MIRA 15:3)

(Concrete construction--Safety measures)

VOSTROV, V.M., inzh.

Jig for welding rectangular flanges. Vod. 1 san. tekhn. no.6:
37 Ja '64 (MIRA 18:1)

VOSTROV, V.M.; Inzh.

Scaffolding

Lumber for plastering work of the facades of low buildings. Stroitel. tekhn. 9 no. 6, 1952.

SO: Monthly List of Russian Accessions, Library of Congress, August 195², Uncl.

VOSTROV, V.M.

Devices for laying polyethylene pipes. Stroi.truboprov. 8 no.7:
25 J1 '63. (MIRA 17:2)

KOZLOV, N.N.; SKVORTSOV, V.V.; OBYSOV, A.N.; OSIPENKO, Yu.K.;
KHOKHLOV, B.A., glav. red.; CHUPROV, D.P., nauchnyy red.;
VOSTROV, V.M., red.; DVIZHKOVA, N.M., red.; ZHEBRAKOV,
N.A., red.; ZLATOTSVETOVA, I.I., red.; RAGAZINA, M.F., red.;
FARADZH, N.O., red.; YEGOROVA, M.I., red.; MASLYANITSYNA,
N.I., red.; PETRYAKOVA, T.D., red.

[Instruments, appliances, and mechanisms for assembling and
special work] Instrumenty, prispособleniia i mekhanizmy dlia
montazhnykh i spetsial'nykh rabot. Moskva, Vol.2. 1962. 226 p.
(MIRA 16:7)

1. Moscow. Gosudarstvennyy institut po vnedreniyu peredovykh
metodov rabot i truda v stroitel'stve.
(Construction equipment)

VOSTROV, V.M., inzh.

All-Union conference on modern industrial methods of manufacturing
and assembling pipe for industrial enterprises. ~~Stroi.~~ Stroi.truboprov.
6 no.10:30-31 0 '61. (MIRA 14:10)
(Pipe--Congresses)

USSR / Weeds and Weed Control.

N

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 58814

Author : Yostroya, E.

Inst : Not given

Title : Chemical Weed Control by Aviation

Orig Pub : Zemledeliye i zhivotnovodstvo Moldavii, 1957,
No 7, 67-68

Abstract : Weed control in green fields of Moldavia with herbicides 2.4-D and 2M-4X sprayed from planes has been observed to be highly effective. It considerably increased the yield and saved labor and capital outlays in the kolkhoz's and sovkhoz's. Avio cultivation of agricultural crops with herbicides in the republic increased from 2.0 thousand ha in 1952 up to 11.6 thousand ha in 1956.

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L 46182-66 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l) BC

ACC NR: AP6016133

SOURCE CODE: UR/0103/66/000/005/0037/0049

AUTHOR: Vostrova, E. I. (Frumze)

48
E

ORG: none

TITLE: Optimum processes in discrete systems containing elements with distributed parameters

SOURCE: Avtomatika i telemekhanika, no. 5, 1966, 37-49

TOPIC TAGS: optimal control, optimal automatic control, automatic control design, automatic control R and D, control theory, automatic control theory, *DIFFERENCE EQUATION, COMPUTER APPLICATION*

ABSTRACT: An optimal control problem is considered for a system described by equations for thermal conductivity of the following type:

$$\frac{\partial u_i}{\partial t} - a_i^2 \frac{\partial^2 u_i}{\partial x^2} = f_i \left(t, x, u_1, \dots, u_n, \frac{\partial u_1}{\partial x}, \dots, \frac{\partial u_n}{\partial x}, a \right)$$

$$(0 < t \leq T, 0 < x < 1, i = 1, \dots, n).$$

with given initial and boundary values. This class of problem can only rarely be completely solved by conventional methods; however, it appears possible to use computers and approximation methods to obtain a solution. It is therefore expedient to consider this problem, not in terms of partial or ordinary differential equations, but in terms

UDC: 62-504.2

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L 46182-66

ACC NR: AP6016133

of corresponding difference equations. The author expresses the problem through a system of difference equations and defines the properties of control for an optimum solution. An example of application for the developed technique is included. Formulas for the incremental increase of the functionals (utilized in the solution of the original problem) are derived and a theorem related to the necessary and sufficient conditions for optimal control for a given system is proved. Orig. art. has: 53 formulas.

SUB CODE: 13,12/

SUBM DATE: 02Mar65/

ORIG REF: 004

Card 2/2

fv

VOSTROVA, L.Ye.

Mixed type boundary value problem for a generalized Lavrent'ev-
Bitsadze equation. Uch.zap.Kuib.gos.ped.inst. no.29:45-66 '59.
(MIRA 14:8)

(Boundary value problems)
(Differential equations, Partial)

16 3500

25008

S/044/61/000/003/009/014
C111/C333

AUTHOR: Vostrova, L. Ye.

TITLE: The mixed boundary value problem for the general equation of Lavrent'yev-Ritsadze

PERIODICAL: Referativnyy zhurnal, Matematika, no. 3, 1961, 51, abstract 3B239 (Uch. zap. Kuybyshevsk. gos. ped. in-t, 1959, vyp. 29, 45-66)

TEXT: The author considers the equation

$$u_{xx} + \operatorname{sgn} y \cdot u_{yy} + a(x,y) u_x + b(x,y) u_y + c(x,y) u = 0 \quad (1)$$

in the domain D. This is bounded: in the semiplane $y > 0$ by the curve Γ with the end points A(-1,0) and B(1,0), and in the semiplane $y < 0$ by the characteristic piece AC and BC. The author sets up the problem T_3 : Determine a solution of (1) in D which satisfies the boundary conditions:

$$\frac{\partial u}{\partial n} \Big|_{\Gamma} = \varphi(s); \quad u \Big|_{BC} = \psi(x)$$

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The mixed boundary value problem ...

25008 S/044/61/000/003/009/014
G111/G333

(R Zh Mat, 1959, 11079). The part of the domain D in which $y > 0$ ($y < 0$) is denoted with D_1 (D_2). It is proved that the solution of the problem is unique in a certain class of generalized solutions, if $c \leq 0$ in D , while in D_2 it holds

$$a + b \leq 0, \quad (2)$$

$$4c - a^2 + b^2 - 2a_x - 2a_y - 2b_x - 2b_y \leq 0.$$

In the domain D_1 the Neumann problem is solved, while in the domain D_2 the solution of the Cauchy-Goursat problem is used which has been obtained by the reviewer (S.P. Pul'kin, R Zh Mat, 1958, 8874, 3B228). By continuous joining of these two solutions the author obtains a singular integral equation with the unknown function $v(x) = \lim_{y \rightarrow 0} \frac{\partial u}{\partial y}$. The existence of the solution of the integral equation follows from the uniqueness of the solution of problem T_3 . If $v(x)$ is known, then $u(x, y)$ can be separately founded in D_1 and D_2 .
[Abstracter's note: Complete translation.] 2-

Card 2/2

VOSTROVA, L.Ye., Cand Phys Math Sci -- (diss) "Mixed boundary-value
problem for the Lavrent'ev-Bitsadze equation." Kazan', 1959,
6 pp (Min of Higher Education USSR. Kazan' Order of Labor
Red Banner State Univ im V.I. Ul'yanov-Lenin) 150 copies
(RL, 20-59, 122)

SOV/20-128-1-49/58

17(2), 17(4)
AUTHORS:

Gol'din, M. I., Vostrova, N. G.

TITLE:

A New Strain From the Group of Tobacco Mosaic Virus, Producing Intranuclear Inclusions

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 1, pp 183-185 (USSR)

ABSTRACT:

At the end of 1957 the authors found a virus not identical with the CI strain, producing inclusions not only in the plasma, but also in the nucleus. It was called after the place of its discovery: Kazakh strain of the group of tobacco mosaic virus. In the USSR this was the first time that a virus producing intranuclear inclusions was found. Apart from a number of important properties characteristic of the common virus, Kazakh virus also shows properties characteristic of a number of viruses different from the tobacco mosaic virus. The authors worked out a method which allows long lasting observations under the microscope in vivo. Cilia and the neighboring tissue of young tobacco plants infected with Kazakh virus were examined by means of this method. Figure 2 shows the various forms of inclusions in the protoplasm and in the nuclei of cilia. It could

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SOV/20-128-1-49/58

A New Strain From the Group of Tobacco Mosaic Virus, Producing Intranuclear Inclusions

be observed that the development of inclusions in a cilium starts at the basis and continues towards the top. The distribution of the inclusions as regards space and time, is irregular, even in homogeneous tissues. An irregular distribution of virus particles could be observed in cilia as well as in cells of the epidermis. It was found that the virus flagellum, a process of the intranuclear inclusion, has distinct and blunt ends. Flagella completely developed in the protoplasm, have pointed thin ends. Although the ends develop simultaneously and in the same medium, they differ in their structure. Apparently the flagellum protruding from the nucleus also contains some nuclear substances. Virus flagella in the nucleus protruding from it and surrounding it, as well as flagella developed in the protoplasm, show a negative reaction with Fel'gen's reagent. There are 2 figures and 6 references, 1 of which is Soviet.

ASSOCIATION:
Card 2/3

Institut mikrobiologii Akademii nauk SSSR (Institute of Microbiology of the Academy of Sciences, USSR)

PAVLOV, Fedor Fedorovich, prof.; VOSTROVA, Ol'ga Danilovna, kand.
tekhn. nauk; GUDKOVA, Irada Inoreyevna, kand. tekhn.
nauk

[Higher geodesy; handbook on practical work (section on
"triangulation")] Vysshaya geodeziia; posobie po prakti-
cheskim rabotam (razdel "Triangulatsiia"). Moskva,
Mosk. gor'nyi in-t, 1961. 159 p. (MIRA 17:10)

1. Kafedra geodezii Moskovskogo gornogo instituta.

VOSTROVA, Ol'ga Danilovna; PAVLOV, F.F., prof., otv. red.; NIKOLAYEVA,
T.A., red.; VINOGRADOVA, V.A., tekhn. red.

[TT-50 and TOM theodolites, NV-1, NSM-2 and NP levels; their
description and tests; laboratory manual] Teodolity TT-50 i
TOM, niveliry NV-1, NSM-2 i NP, ikh opisanie i poverki; poso-
bie k laboratornym rabotam. Moskva, Univ. druzhby narodov,
1963. 51 p. (MIRA 17:4)

VOSTROVSKY, J.; SIMON, L.; VOSOLSOBE, L.

The measurement of the velocity of "keranzite" balls in a rotary kiln by means of radioactive isotopes. p. 359. (STAVIVO, Vol. 35, No. 9, Sept 1957, Praha, Czechoslovakia)

30: Monthly List of East European Accessions (REAL) LC, Vol. 6, No. 12, Dec 1957. Uncl.

VOSTROVSKY, Simon J.

CZECHOSLOVAKIA/Chemical Technology - Chemical Products and
Their Application: Chemico-technological Problems
of Nuclear Engineering.

H-7

Abs Jour : Ref Zhur - Khimiya, No 3, 1958, 8564

Author : Simon Vostrovsky J.

Inst : -

Title : Production of Radioisotopes for Industrial Use.

Orig Pub : Techn. praca, 1957, 9, No 2, 83-88

Abstract : General information is provided on radioactive isotopes, their production, on nuclear reactions induced by the action of charged particles and by the action of neutrons. The following tables are included: activation of elements in a cyclotron; laboratory sources of neutrons; most important beta-radioisotopes produced in reactors; most important gamma-radioisotopes produced in reactors, and examples of the most often utilized radioactive isotopes.

Card 1/1

VOSTRUKHIN, N. P.

Vostrukhin, N. P.

"Changes in the properties of sod-podzolic soils under the influence of grass-field crop rotation." Belorussian Order of Labor Red Banner Agricultural Academy. Gorki, 1956 (Dissertation for the degree of Candidate in Agricultural Sciences)

Knizhnaya letopis
No. 15, 1956. Moscow

VOSTRUKHINA, N.P.

USSR/Cultivated Plants - Technical, Oil, and Sugar Plants.

M-4

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10917

Author : Vostrukhina, N.P.

Inst : -

Title : Sugar Beet Density in the Plantations of the Western Oblast's of the BelSSR.

Orig Pub : Sakharnaya svekla, 1957, No 4, 11-13

Abstract : Field experiments conducted in 1951-1956 on the Garusovskaya Agricultural Testing Station (BelSSR) have demonstrated that increasing the distance between rows from 45 to 60 cm. (reducing the plant density from 111 to 83.3 thousand per hectare) did not cause a reduction in the sugar beet yield and harvest but did reduce the manual labor input on crop maintenance by 9.4%. Increasing the space between rows, and using the square and square-nest methods of planting, permit manual labor input to be

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USSR/Cultivated Plants - Technical, Oil, and Sugar Plants.

M-4

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10917

reduced more than 30%. It is emphasized that under Belorussian conditions increasing the density of sugar beet planting (100-120,000/hectare) is pointless and does not justify itself.

Card 2/2

VOSTRUKHINA, T.M.; LADYSHKINA, T.Ye.

New data on the study of Quaternary sediments in the Kem' region of Karelia. Dokl. AN SSSR 155 no. 3:559-561 Mr '64. (MIRA 17:5)

1. Gosudarstvennyy geologicheskii komitet SSSR pri Vysshem Sovete narodnogo khozyaystva SSSR. Predstavleno akademikom V.N.Sukachevym.

VOSTRUKHINA, T.M.

Spore-pollen characteristics of late- and post-glacial sediments
of the Onega Peninsula. Sov.geol. 5 no.9:132-139 S '62.

(MIRA 15:11)

(Onega Peninsula--Palynology)

VOSTRUKHINA, T.M.; LADYSHKINA, T.Ye.

Spore-pollen spectra and the diatom flora of glacial-lacustrine
deposits of the southern part of the Kola Peninsula. Dokl.AN SSSR
145 no.5:1107-1109 '62. (MIRA 15:8)

1. Predstavleno akademikom V.N.Sukachevym.
(Kola Peninsula--Geology, Stratigraphic)

VOSTRUKHINA, T.M.

Dating the glacial lacustrine deposits of the Onega Peninsula.
Dokl.AN SSSR 145 no.1:151-153 J1 '62. (MIRA 15:7)

1. Predstavleno akademikom V.N.Sukachavym.
(Onega Peninsula—Paleobotany, Stratigraphic)

NIKONOV, A.A.; VOSTRUKHINA, T.M.

Quaternary stratigraphy in the northern part of the Kola
Peninsula. Dokl. AN SSSR 158 no.1:104-107 S-0'64
(MIRA 17:8)

1. Geologicheskii institut Kol'skogo filiala imeni S.M.Kirova
AN SSSR. Predstavleno akademikom A.A. Grigor'yevym.

AUTHORS: Yakubovich, A. Ya., Razumovskiy, V. V. SOV/79-28-7-45/64
Vostrukhina, Z. H., Rozenshteyn, S. M.

TITLE: Syntheses of Vinyl Monomers (Sintezy vinilovykh monomerov)
III. On the Syntheses of the Vinylesters From Acet- and Chloro-
mercuroacetaldehydes, and on the Mechanism of These Reactions
(III. O sintezakh slozhnykh vinilovykh efirov iz atset-i khlor-
merkuratsetal'degidov i mekhanizme etikh reaktsiy)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 7,
pp. 1930 - 1936 (USSR)

ABSTRACT: The method of the reaction of acetaldehyde with the chlorine
anhydride of the corresponding acid in the medium of a tertiary
base described by A.M. Sladkov and G.S. Petrov (Ref 1) could
not be proved by the authors in any case. In using pyridine,
for instance, neither the vinylbenzoate, vinylacetate nor the
vinyl esters of butyric-, caproic- or chloroacetic acids were
obtained although the conditions mentioned in carrying out the
reaction were strictly followed. Besides, the crystalline de-
positions occurring in this reaction are not mentioned. The vinyl

Card 1/3

Syntheses of Vinyl Monomers. III. On the Syntheses of SOV/79-28-7-45/64
the Vinylesters From Acet- and Chloromercuroacetaldehydes, and on the Mechanism
of These Reactions

esters of the phosphoric acids could be obtained by the reaction of the acetaldehyde with their chlorine anhydrides in the presence of triethylamine (Ref 3), the yield of vinylbenzoate amounting to 15% (Ref 3). In view of these facts another method of synthesis was tried (Ref 4) according to which the vinyl esters of a series of acids could be synthesized in good yields. Concluding the following results may be stated: In the synthesis of the vinyl esters of the carboxylic acids from acetaldehyde, acylchloride and pyridine only the chlorides of α -acyloxyalkylpyridinium could be obtained. In using triethylamine (instead of pyridine) with benzoylchloride a vinylbenzoate (yield 15%) was obtained. By the direct coupling of the halogen anhydrides of the acids to the aldehydes the following compounds were synthesized: α -chlorethylacetate, α -chlorethylbenzoate, chloromethylmethacrylate, bromomethylmethacrylate, and α -chlorethylmethacrylate. This reaction is of general preparative character. By the reaction of monochloromercury acetaldehyde with the halogen anhydrides of the acids the vinyltrifluoroacetate and the

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Syntheses of Vinyl Monomers. III. On the Syntheses of SOV/79-28-7-45/64
the Vinylesters From Acet- and Chloromercuroacetaldehydes, and on the Mechanism
of These Reactions

vinyl-p-cyanobenzoate were synthesized. There are 20 references,
8 of which are Soviet.

SUBMITTED: June 3, 1957

1. Vinyl esters--Synthesis
2. Acetaldehyde--Chemical reactions
3. Chemical reactions--Analysis

Card 3/3

BUTTA, Hugo; VOSTRY, Bohumil

Electric power distribution in the metallurgical combine East
Slovakia Steel Mills in Kosice. Energetika Cz 12 no.2:71-74 F '62.

1. Hlavní projekt, Praha.

ACC NR: AP7001706

SOURCE CODE: CZ/0092/66/017/006/0366/0369

AUTHOR: Vostry, J.

ORG: Mathematical and Physical Faculty of the Charles University, Prague

TITLE: Tuominen's modification of Babcock's theory of the solar magnetic field

SOURCE: Ceskoslovenska akademie ved. Byulleten' astronomicheskikh institutov Chekhoslovakii, v. 17, no. 6, 1966, 366-369

TOPIC TAGS: magnetic field, magnetic field measurement, solar magnetic field, sunspot, *solar activity*

ABSTRACT: In Babcock's model of solar activity, the initial magnetic field is given by the form $H_0^0 = H_0^0 \sec \phi$ on the solar surface. This field has singularities at the solar poles. In accordance with Sporer's law, which was derived from this field, the sunspot activity begins at the heliographic latitude $\phi = 45^\circ$. This value is too high to agree with observations. Tuominen suggested that magnetic fields $H_0^0 = H_0^0$ and $H_0^0 \cos \phi$ be applied in order to overcome these difficulties. Sporer's law for these two cases and Gleissberg's law of migration in the heliographic latitude of the sunspot area are derived in the present paper. On the basis of Gleissberg's law, it is shown that the two magnetic

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ACC NR: AP7001706

fields do not provide a correct description of either the average velocity of migration in the heliographic latitude of the sunspot area or the velocity of migration in the heliographic latitude of the area in which the sunspot activity begins. Orig. art. has: 2 figures, 13 formulas, and 2 tables.

SUB CODE: 03/ SUBM DATE: 02Mar66/ ORIG REF: 001/ OTH REF: 009

Card 2/2

VOSTRYAKOV, A.A.

136-2-5/22

AUTHOR: Okunev, A.I., Usachev, N.M., Lutokhin, D.I., Kurts, V.V.,
Redotova, B.I. and Vostriyakov, A.A.

TITLE: Results of Industrial Tests on the Smelting of Roasted
Collective Copper-Zinc Concentrates. (Rezultaty promy-
shlennykh ispytaniy plavki obozhzhennykh kollektivnykh
medno-tsinkovykh kontsentratorov)

PERIODICAL: Tsvetnyye Metally, 1957, No.2, pp. 22 - 31 (USSR)

ABSTRACT: The use of flotation for concentrating many Ural copper-
zinc ores has led to the production of copper concentrates
containing as much as 10-12% with copper contents of 8-10%.
The aim of the present work was to test the smelting of roasts
of such concentrates in a full-scale reverberatory furnace to
give a zinc slag. The experimental furnace used was at the
Sredneural'skiy Works and had a hearth area of about 8 m²,
chrome-magnesite walls and hearth and silica roof and was fired
with coal dust. The following main results were obtained in
2.5 - 3 months' work with concentrates containing 7-9% Cu
and 6 - 15% Zn to give slags with 14-15% Zn. The results of
laboratory investigations on zinc distribution between slag
and matte in relation to their compositions were confirmed.
When mattes contained 40 - 50% Cu, the zinc content in the
slag was about 1.6 - 1.8 times greater than in the matte. The

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136-2-5/22

Results of Industrial Tests on the Smelting of Roasted Collective
Copper-zinc Concentrates.

optimal compositions of matte (45% Cu) and slag as well as the degree of de-sulphurisation. Deep roasting is one of the main requirements, even when roasting and smelting are carried out in one unit. With deep roasts 80% of the zinc goes from the solid charge into the slag, 8.9% into the matte and 8-12% into the gas. With a 45-50% Cu matte the copper content of dumped slags was 0.7%; extraction of copper into the matte depends on the copper content of the concentrate and can be 90-93% with return of dust to the smelter, and up to 96-97% with treatment of the zinc slag. Extraction of noble metals was about the same as with raw or lightly-caloried charge. Average dust production is 4.5% of the charge weight and there can be up to 20-24% zinc in it (depending on the zinc content of the charge). Optimal sulphur content of the roast is 9-10% (2.0 - 2.5% sulphate sulphur); de-sulphurisation during smelting is 48-56%. Good separation of smelting products was always obtained, but observations on the state of the hearth suggest desirable design changes. Besides tabulation of materials analysis and metals balance graphs of zinc distribution vs matte copper content, of copper content in matte and slag vs time and of product temperatures vs time are given.

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Results of Industrial Tests on the Smelting of Roasted Collective
Copper-zinc Concentrates. ^{136-2-5/22}

Information on productivity, fuel rates and behaviour of
refractions is included.

3/3 There are 3 figures, 5 tables and 3 references, of which 1 is
Slavic.

ASSOCIATION: Unipromed' and the Sredneural'skiy Copper Smelting
Works. (Unipromed' i Sredneural'skiy Medeplavilnyy
Zavod)

AVAILABLE: Library of Congress

VOSTRYAKOV, A.A. (Sverdlovsk); VATOLIN, N.A. (Sverdlovsk); YESIN, O.A.
(Sverdlovsk); KONOVALOV, G.F. (Sverdlovsk)

Electromagnetic separation of FeSn_2 crystals from liquid tin.
Izv. AN SSSR. Met. no.6:58-61 N-D '65. (MIRA 19:1)

1. Submitted June 3, 1964.

L 32241-65 EPI(m)/EPR/EWP(t)/EWP(b) Ps-L LJP(c) JW/JD/JD

ACCESSION NR: AR5004768

8/0137/61/000/010/1006/1006

SOURCE: Ref. zh. Metallurgiya, Abs. 10A37

AUTHOR: Vostriyakov, A. A.; Vatolin, N. A.; Ignatenko, A. P.

... ..

... .. increase in the chromium content of the alloy

increase in the strength of the bond between some groups in the

VOSTRYAKOV, A.A.; VATOLIN, N.A.; YESIN, O.A.

Viscosity and electric resistance of manganese alloys with silicon,
iron, and carbon. Zhur. neorg. khim. 9 no.8:1911-1914 Ag '64.
(MIRA 17:11)

3/126/63/015/002/010/033
 8193/2383

AUTHORS: Vitolin, N.A., Vostukhov, A.A. and Yesin, G.A.
 TITLE: Viscosity of liquid iron-carbon alloys
 PERIODICAL: Fizika metal'ov i metallovedeniye, v. 15, no. 2,
 1963, 222 - 228

TEXT: The method of attenuation of torsional oscillations of a crucible containing the molten alloy was used to determine the effect of composition and temperature on the viscosity of iron-carbon alloys. The experimental materials contained up to 5% C and the tests were conducted at 1270 to 1720 °C. The results (side-by-side with those obtained by other workers) are reproduced in Fig. 2, where the viscosity ($\eta \cdot 10^3$ poise) is plotted against the C content of the alloy, the various curves relating to data obtained by: 1-Barfield and Kitchener (J. Iron and Steel Inst., 1955, 4, 324); 2-Lurovskiy and Lyubimov (Izv. vuzov, Chernaya metallurgiya, 1960, no. 2, 15); 3-Wen Li-chih and Arsent'yev (Izv. vuzov, Chernaya metallurgiya, 1960, no. 2, 15); 4-Thielman and Thielman (Zahl. u. Eisen, 1927, 17, 202); 5 - the present authors in tests at 1270, 1500, 1600 and 1720 °C.
 Card 1/3

S/126/63/015/002/111/77
E195/E383

Viscosity of

curve 9 represents the concentration-dependence of the free volume ($\text{cm}^3/\text{g.at.}$, right-hand scale) of the alloy. It will be seen that at each test temperature η sharply decreases as the C content increases. From 1.2 to 1.4, η remains practically constant in the 0.2 to 2.2 C range and then increases again. Within the variation in η of 1.1 to 1.4, η follows the constant η of the free volume of the alloy, there is no quantitative agreement. This and other considerations led the present authors to the conclusion that the shape of the viscosity isotherms of Fe-C, carbon and other alloys could not be explained by the free-volume of the liquid increasing with increasing carbon content, and that the specific energy of the energy of the atomic interaction, brought about by the presence of the carbon content in the melt, was of much greater importance. There are 2 figures and 1 table.

ASSOCIATION:

Institut metallurgii Sverdlovsk (Institute of Metallurgy, SFAN, USSR)

SUBMITTED:

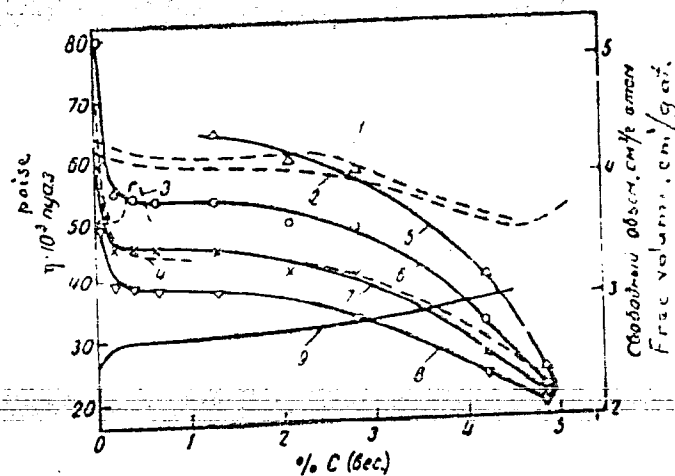
July 11, 1962

Card 2/3

Viscosity of

S/126/63/015/002/010/033
E195/2363

Fig. 2:



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29827
S/020/61/140/006/028/030
B103/B101

5.2200

AUTHORS: Okunev, A. I., Galimov, M. D., and Vostryakov, A. A.

TITLE: Oxidation and volatilization processes of germanium sulfides

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 140, no. 6, 1961, 1384-1387

TEXT: The authors studied: A) oxidation of GeS_2 , B) sublimation of Ge from GeS_2 in neutral atmosphere, and C) oxidation of GeS . To A): The thermogravimetric method and an apparatus described previously (A. I. Okunev, L. A. Popovkina, Tsvetnyye metally, no. 5 (1959)) were used. Weighed portions of 100 mg were heated with a rate of 6-11 deg/min in case A) as well as C). The escaping SO_2 was drawn off and titrated with starch iodine. It has been found that oxidation of GeS_2 in air begins at 260-280°C and may be subdivided into the temperature ranges I-V (Table 1). The reactions of ranges I-IV are total reactions of the processes: $\text{GeS}_2 + 3\text{O}_2 = \text{GeO}_2 + 2\text{SO}_2$ (1) and $\text{GeS}_2 + 4\text{O}_2 = \text{Ge}(\text{SO}_4)_2$ (2). Oxides and sulfates are formed simultaneously

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B103/B101

Oxidation and volatilization...

in all ranges up to 667°C, whereby basic sulfates $\text{GeO}_2 \cdot \text{Ge}(\text{SO}_4)_2$ may be formed. Reaction (2) does not take place in range V, but GeS_2 is rapidly further oxidized to the dioxide according to reaction (1). Moreover, the sulfate interacts with the initial sulfide, whereby GeO_2 is formed:

$\text{GeS}_2 + 3\text{Ge}(\text{SO}_4)_2 = 4\text{GeO}_2 + 8\text{SO}_2$. At the same time, the sulfate decomposes with formation of GeO_2 . Above 670°C, GeO_2 is the final product. Oxidation is not yet complete at 720°C (attains 80 %), since it is strongly inhibited by fusion of the weighed portion. Sulfate formation is most intensive in ranges I and III, whilst oxidation proceeds much slower in range IV, since a film of GeO_2 and $\text{Ge}(\text{SO}_4)_2$ forms on the surface. In this instance, $\text{Ge}(\text{SO}_4)_2$ is not decomposed. Conclusions: $\text{Ge}(\text{SO}_4)_2$ is rather stable and begins to decompose with increasing temperature in the presence of the sulfide only at 670°C. Under these circumstances, it has been found at 440, 455, 500, 525, 570, 625, 675, and 690°C that GeS_2 is oxidized within the first 10-20 min, whereupon SO_2 separation ceases. The highest content

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B103/B101

Oxidation and volatilization...

of $\text{Ge}(\text{SO}_4)_2$ was reached in the oxidation products at 525°C . Above 530°C , $\text{Ge}(\text{SO}_4)_2$ begins to decompose, when further heated. At 570°C , the sulfate content increases gradually within the first 20 min and decreases, when this temperature is further conserved. This is due to both interaction with the residual sulfide and dissociation. At all temperatures, the sulfide content does not exceed 30 %. To B) The weight of GeS_2 decreases significantly in oxygen-free N_2 only above 700°C (by 11 %). This loss attains 45 % at 800°C to decrease abruptly at $830\text{--}850^\circ\text{C}$ owing to fusion. The product of GeS_2 dissociation (at $500\text{--}600^\circ\text{C}$) is a dark grey powder of GeS -like appearance. The oxidation curve of this powder is similar to that of GeS . GeS_2 sublimates at 650°C with constant rate during the entire test time. To C): A small quantity of SO_2 is separated at 440°C with heating rates of 3.6, 6.0, and 8.4 deg/min . Then, S separation becomes irregular; it increases suddenly at 560 and 625°C . The main process is here $\text{GeS} + 2\text{O}_2 = \text{GeO}_2 + \text{SO}_2$, whereby $\Delta P = 0$. GeS is oxidized both

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8/020/61/140/006/028/030
B103/B101

Oxidation and volatilization...

in solid and after sublimation also in gaseous phase. Germanium sublimates should be oxidized under productional conditions in gaseous phase, as long as the sulfide particles are still in disperse phase. There are 4 figures, 1 table, and 12 references: 7 Soviet and 5 non-Soviet. The two references to English-language publications read as follows: R. B. Bernstein, D. Cubiceitty, J. Am. Chem. Soc., 73, 4112 (1951); Eng. and Mining J., 157, No. 5, 77, 1956.

ASSOCIATION: Ural'skiy nauchno-issledovatel'skiy projektnyy institut
mednoy promyshlennosti (Ural Scientific Research and Planning
Institute of the Copper Industry)

PRESENTED: April 4, 1961, by S. I. Vol'fkovich, Academician

SUBMITTED: April 3, 1961

Card 4/54

OKUNEV, A.I.; GALIMOV, M.D.; VOSTRYAKOV, A.A.

Processes of oxidation and volatilization of germanium sulfides.
Dokl. AN SSSR 140 no.6:1384-1387 0 '61. (MIRA 14:11)

1. Ural'skiy nauchno-issledovatel'skiy proyektnyy institut mednoy
promyshlennosti. Predstavleno akademikom S.I.Vol'fkovichem.
(Germanium sulfide)

VOSTRYAKOV, A.A.

OKUNEV, A.I.; VOSTRYAKOV, A.A.

Some problems in the treatment of Ural copper-zinc concentrates
in a fluidized bed. TSvet. met. 30 no.11:24-29 N '57. (MLRA 10:11)

1. Unipromed'.
(Copper--Metallurgy) (Zinc--Metallurgy) (Fluidization)

VOSTRYAKOV A.A.

136-11-7/17

AUTHORS: Okunev, A.I. and Vostryakov, A.A.

TITLE: Some Problems Concerning the Treatment of Ural Copper-zinc Concentrates in the Suspended State (Nekotoryye voprosy pererabotki Ural'skikh medno-tsinkovykh kontsentratov vo vzveshennom sostoyanii)

PERIODICAL: Tsvetnyye Metally, 1957, No.11, pp. 24 - 29 (USSR).

ABSTRACT: In this article, theoretical and practical data are used for the construction of material and heat balances, the discussion of the distribution of zinc between the products of oxygen smelting of copper-zinc concentrates, the analysis of copper recovery, furnace design and other problems. The balances show that for concentrates with 40% S to produce 70% SO_3 gases smelting with oxygen leads to excessive temperatures: leaner mattes and gas with 40-50% SO_3 are recommended and the possibility of preliminary roasting to produce elementary sulphur is considered. Analysis of zinc transfer into the gas phase showed that with low-sulphur concentrates when the temperature does not exceed 1300 - 1400 °C, 3-18% of the zinc enters the gas phase, 75-85% the slag and the rest the matte; with high-sulphur concentrates 40% of the zinc enters the gas phase but by re-charging the dust all the elements can be transferred into

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136-11-5/17

Some Problems Concerning the Treatment of Ural Copper-zinc
Concentrates in the Suspended State

the slag. Thus, in both cases, oxygen smelting offers the possibility of producing a zinc slag with roasting and smelting being effected together in one plant. For Ural copper-zinc concentrates, smelting with oxygen can be effected to give relatively lean (25-35%) mattes (high copper recovery without de-coppering the slag with pyrites); copper can be extracted from rich mattes by burning high sulphur concentrates; fuming is another possibility considered. Flash roasting, it is suggested, could lead to simplification of furnace construction, now being studied by the Unipromed', UFAN, Giprotsvetmet and other institutes. In the article, conditions for smelting Ural copper and copper-zinc concentrates with hot blast, oxygen-enriched blast and blast both hot and oxygen-enriched have been formulated: a temperature of 400 °C or an oxygen content of 30% are necessary. The construction of the appropriate flash-roasting plant at the Urals Works is recommended. There are 5 figures, 2 tables, 4 Russian and 1 English references.

ASSOCIATION: Unipromed'

AVAILABLE: Library of Congress
Card 2/2

1. Copper zinc concentrates-Treatment
2. Furnaces-Preparation
3. Furnaces-Construction

137-58-6-12023

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 119 (USSR)

AUTHOR: Okunev, A.I., Vostryakov, A.A., Aglitskiy, V.A.,
Travnikova, L.B.

TITLE: Fundamental Factors Influencing the Selection of Optimal
Composition of Matte and Slag During Processing of Copper-
zinc Cinders in Reverberatory Furnaces (Osnovnyye faktory,
opredelyayushchiye vybor optimal'nogo sostava
shteyna i shlaka pri pererabotke medno-tsinkovykh ogarkov v
otrazhatel'nykh pechakh)

PERIODICAL: Tr. i materialy. Ural'skiy n.-i. i proyekt. in-t medn. prom-
sti, 1957, Nr 2, pp 365-372

ABSTRACT: A brief examination of the fundamental factors that influence
the selection of matte (M) and slag composition during process-
ing of Cu-Zn concentrates in accordance with the following pro-
cedure: deep-penetration roasting-smelting-fumigation. The
selection of an optimum M composition in smelting of roasted
Cu-Zn concentrates is dictated by the following basic factors:
1) Variation in distribution of Zn between the slag and the M de-
pending on the composition of the latter: 2) variation in specific

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137-58-6-12023

Fundamental Factors Influencing the Selection of Optimal Composition (cont.)

gravity of the M depending on its composition: 3) a change in the melting point of the M; 4) a change in the fluidity of the M. It is noted that the distribution of Zn is favorably affected by an increase in the Cu content of the M and that it is most desirable that the Cu content be maintained at the highest possible value (up to 60-80%). The specific gravity of liquid M increases continuously with increasing Cu content. M's containing maximum possible amounts of Cu are best suited for efficient separation of M and slag, whereas M's containing 40-45% of Cu are most desirable from the point of view of fusibility of the M. These same M's also exhibit the best fluidity. Taking all factors presented into consideration one may state that the optimal value of Cu content in M's constitutes 45%. In reverberatory-furnace smelting of Cu-Zn concentrates the slags must contain 32-34% (or less) of SiO₂ depending on the Zn content.

G.S.

1. Copper ores--Processing
2. Zinc ores--Processing
3. Slags--Composition
4. Slags--Properties

Card 2/2

VOSTRYAKOV, A.A.; VATOLIN, N.A.; YESIN, O.A.

Viscosity and electric resistance of liquid iron alloys with
phosphorus and sulfur. Fiz. met. i metalloved. 18 no.3:476-
478 3 '64. (MIRA 17:11)

1. Institut metallurgii, Sverdlovsk.

VOSTRYAKOV, A.A.; VATOLIN, N.A.; YESIN, O.A.

Viscosity and electric resistance of liquid chromium alloys.
Fiz. met. i metalloved. 16 no.5:675-680 N '63. (MIRA 17:2)

1. Institut metallurgii Ural'skogo filiala AN SSSR.

VOSTRYAKOV, A.A.; OKUNEV, A.I.

Ignition temperature of sulfide concentrates. TSvet. met. 34
no.5:72-73 My '61. (MIRA 14:5)

1. Unipromed'.

(Sulfides—Metallurgy)

OKUNIV, A.I.; VOSTRYAKOV, A.A.; AGLITSKIY, V.A.; TRAVNIKOVA, L.B.

Basic factors determining the choice of the best matte and slag
composition for processing copper-zinc tailings in reverberatory
furnaces. Trudy Unipromedi no.2:365-372 '57. (MIRA 11:11)
(Copper Metallurgy) (Zinc--Metallurgy)

VOSTRYAKOV, A.A.

OKUNEV, A.I.; USACHEV, N.M.; LUTOKHIN, D.I.; KURTS, V.V.; FEDOTOVA, Ye.I.;
VOSTRYAKOV, A.A.

Results of industrial tests for smelting roasted copper-zinc
collector concentrates. TSvet. met. 30 no.2:22-31 P '57. (MLRA 10:4)

1. Unipromed' i Sredneural'skiy medeplavil'nyy zavod.
(Copper--Metallurgy) (Zinc--Metallurgy)

S/0126/63/016/005/0675/0680

ACCESSION NR: AP4004688

AUTHORS: Vostryakov, A. A.; Vatolin, N. A.; Yesin, O. A.

TITLE: Viscosity and electrical resistance of molten chromium alloys

SOURCE: Fizika metallov i metallovedeniye, v. 16, no. 5, 1963, 675-680

TOPIC TAGS: molten chromium alloy, chromium alloy, viscosity, electrical resistance, composition, molten alloy, molten alloy viscosity, molten metal viscosity

ABSTRACT: The variation of kinematic viscosity and electrical resistivity of liquid Cr-alloys with Fe, C, and Al with respect to temperature and Cr content was studied by the torsional oscillation method (of crucible with the melt). The alloys were prepared of technically pure iron, chromium obtained by the aluminothermic method, electrolytic aluminum, and pure graphite. These materials were melted in a resistance oven filled with helium. Kinematic viscosity and electrical resistivity were calculated by the Ye. G. Shvidkovskiy (Nekotoryye voprosy vyazkosti rasplavlennyykh metallov, GITTL, 1955) and A. R. Regel' (ZhTF, 1948, 18, 1511) formulas. It was established that: 1) the viscosity and activation energy isotherms of liquid Fe-Cr had minima corresponding to those on the line of liquidus; 2) the viscosity of carbon-free ferrochrome increased suddenly at a Cr content

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ACCESSION NR: AP4004688

exceeding 40% due to the ability of the alloy to absorb gases and to enter into reactions with refractory materials; 3) the viscosity of a carbon-saturated ferrochrome increased considerably at 1550C; this is explained by the separation of the solid carbon phase; 4) the viscosity of ferrochrome containing 5% of C showed a stronger increase with the increase in Cr concentration than in the Fe-Cr system; this is assumed to be due to the formation of chromium carbides; 5) the viscosity isotherms of the Fe-C system had a minimum at 3.5% C; the increase in temperature from 1400 to 1600C caused the rise in the minimum; 6) the electrical resistance of carbon-free ferrochrome is somewhat lower than that of the carbon-containing alloys. In both cases the resistance is almost independent of the Cr content. Orig. art. has: 2 tables and 4 figures

ASSOCIATION: Institut metallurgii UFAN SSSR (Institute of Metallurgy UFAN SSSR)

SUBMITTED: 17May63

DATE ACQ: 03Jan64

ENCL: 00

SUB CODE: ML

NO REF SOV: 015

OTHER: 007

Card 2/2

PO-6/Pg-4/Pg-6/Pg-4

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"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001861110001-2

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001861110001-2"

VOSTRYAKOV, A. V.

"Problem of the Most Recent Movements of the Earth's Crust in the Lower Volga Region," Dokl. AN SSSR, 89, No.5, 1953. pp 905-907

States that regression of the Akchagil' Sea could not have been simply of a local character, but seems to reflect an occurrence which had taken place in the entire Akchagil' basin, as is verified by the fresh water mollusks and fine gravel encountered in the middle part of the Akchagil' deposit in Kashkentoy Chal and Gaysin. Consequently, a two fold regression of the Akchagil' Sea has now been established for the Lower Volga Region. Presented by Acad D. S. Belyankin.

259T32

VOSTRYAKOV, A.V.

The northern boundaries of marine apsheron deposits. Dokl.AN
SSSR 103 no.6:1081-1084 Ag '55. (MLRA 9:1)

1.Saratovskiy gosudarstvennyy universitet imeni N.G.Chernyshev-
skogo. Predstavleno akademikom N.M.Strakhovym.
(Caspian sea region--Geology, Stratigraphic)

VOSTRYAKOV, A.V., MIZINOV, I.V., MOSKVITIN, A.I., CHOURYAYEVA, A.A.

Climatic conditions of the akchagyl stage based on new lithological and micropaleobotanical investigations in the southern trans-Volga region. Dekl. AN SSSR 105 no.1:144-146 N '55. (MLRA 9:3)

1. Institut geologicheskikh nauk Akademii nauk SSSR. Predstavleno akademikom N.M. Strakhovym.
(Volga Valley--Paleobotany) (Paleoclimatology)

VOSTRYAKOV, A.V.

Contact of Akchagyl and Apsheron sediments in the lower trans-Volga region. Nauch.dokl.vys.shkoly; geol.-geog.nauki no.1:94-97 (MIRA 12:6) '59.

1. Saratovskiy universitet, geologicheskiy fakul'tet, kafedra obshchey geologii i poleznykh iskopayemykh.
(Volga Valley--Geology, Stratigraphic)

VOSTRYAKOV, A.V.

Miocene variegated sediments in the southern part of the
Obshchiy Syrt. Uch.zap.SGU 65:21-27 '59. (MIRA 16:1)
(Obshchiy Syrt--Rocks, Sedimentary)

VOSTRYAKOV, A.V.

Buried karst topography of the southern part of Obshchly 3yrt and
adjoining parts of the Caspian Lowland. Uch.zap. SGU 74:231-286
'60. (MIRA 15:7)

(Caspian Lowland--Karst)

VOSTRYAKOV, A.V.

Indications of a glacial climate in the Upper Pliocene of
the lower Volga Valley. Dokl. AN SSSR 147 no.1:181-183
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